

Reply to Office Action dated October 20, 2005

REMARKS

Claims 1-27 and 29-30 are pending in this application. By this Amendment, the specification and claims 1, 5, 9-10, 14, 17, 20, 24-25 and 27 are amended, claim 28 is canceled without prejudice or disclaimer and claims 29-30 are added. Various amendments are made to the claims for clarity and are unrelated to issues of patentability.

The Office Action objects to claim 1 because of an informality. It is respectfully submitted that the above amendment to claim 1 obviates the grounds for objection. Withdrawal of the objection is respectfully requested.

The Office Action states that the word "auxiliary" in claim 10 is indefinite. While applicant respectfully disagrees, each of dependent claims 9 and 10 is amended so as to delete the reference to "auxiliary."

The Office Action rejects claim 24 under 35 U.S.C. §103(a) over U.S. Patent 6,437,577 to Fritzmann et al. (hereafter Fritzmann). The Office Action also rejects claims 1, 5-6, 9-10, 14-15, 17-19, 21-23 and 25-26 under 35 U.S.C. §103(a) over Fritzmann in view of PCT/F191/00180 to Savusalo. Still further, the Office Action rejects claims 2 and 20 under 35 U.S.C. §103(a) over Fritzmann and Savusalo in view of U.S. Patent 6,690,366 to Kitahashi. The Office Action rejects claims 3-4, 16 and 27 under 35 U.S.C. §103(a) over Fritzmann and Savusalo in view of U.S. Patent 5,903,422 to Hosokawa. Still further, the Office Action rejects claims 11 and 12 under 35 U.S.C. §103(a) over Fritzmann and Savusalo in view of Hosokawa. Finally, the Office Action rejects claim 13 under 35 U.S.C. §103(a) over Fritzmann, Savusalo, Hosokawa and Kitahashi. The rejections are respectfully traversed.

Independent claim 1 recites a current sensing circuit to sense a current consumption amount of a power amplifier that amplifies a transmission signal and a baseband chip to determine malfunction of a first antenna based on the sensed current, the baseband chip to control switching to a second antenna when the first antenna is determined to be malfunctioned. Independent claim 1 also recites a communication band switch to selectively switch the transmission signal from the first antenna to the second antenna based on the baseband chip.

The applied references do not teach or suggest all features of independent claim 1. In particular, the Office Action agrees that Fritzmann does not teach a current sensing circuit to sense a current consumption amount of a power amplifier and a baseband chip to determine a malfunctioning of a first antenna based on a sensed current. The Office Action then relies on Savusalo as teaching a current sensing circuit and baseband chip. That is, the Office Action references Savusalo's Figure 1 and elements R1, CNA and LNA1. However, applicant respectfully submits that Savusalo does not teach or suggest all the missing features of independent claim 1.

Savusalo merely discloses the determination of whether an amplifier LNA1 has a failure based on the signal cd1. That is, the signal cd1 is proportional to a power consumption of an amplifier LNA1. See page 4, lines 5-7. Therefore, the signal cd1 relates to conditions of the amplifier LNA1. Savusalo has teaching or suggestion for determining malfunction of an antenna. Savusalo relates to power consumption of amplifiers without any suggestion for determining malfunctions of antennas. Savusalo does not disclose any type of data relating to malfunction of antenna in comparison with a sensed current. Accordingly, Savusalo does not

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teach or suggest the claimed baseband chip to determine malfunction of an antenna based on a sensed current. Thus, independent claim 1 defines patentable subject matter at least for this reason.

Independent claim 11 also defines patentable subject matter for at least similar reasons. That is, independent claim 11 recites a baseband chip to determine that the antenna connected to a current transmission path is in an electrically malfunction state based on the detected voltage level. Savusalo does not teach or suggest the claimed baseband chip to determine that the antenna connected to the current transmission path is an electrically malfunction state based on the detected voltage level. Savusalo does not relate to data for determining whether an antenna is in an electrically malfunction state based on a detected voltage level. The other applied references do not teach or suggest these missing features. Accordingly, independent claim 11 defines patentable subject matter.

Furthermore, independent claim 14 recites determining that a current antenna has a malfunction if the sensed amount of current does not come within the allowance range and switching to a preliminary antenna when the current antenna is determined to have a malfunction. For at least similar reasons as set forth above, the applied references do not teach or suggest all these features of independent claim 14. At best, Savusalo only discloses detecting a power consumption of an amplifier. Thus, independent claim 14 defines patentable subject matter.

Applicant gratefully acknowledges the Office Action's indication that claims 7 and 28 contain allowable subject matter. By this Amendment, independent claim 24 is amended to

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include allowable features of dependent claim 28. Thus, independent claim 24 is believed to define patentable subject matter. Furthermore, dependent claim 30 includes features similar to allowable dependent claim 7. Thus, dependent claim 30 is believed to define patentable subject matter at least for this reason.

Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

For example, dependent claim 5 recites that the baseband chip determines malfunction of the first antenna when a sensed current increases. See also dependent claim 29. In rejecting previous dependent claim 5, the Office Action asserts that an increased current would indicate increased power consumption in the amplifier. However, the applied references do not suggest determining malfunction of the first antenna when a sensed current increases as recited in dependent claim 5. Thus, dependent claim 5 (and similarly dependent claim 29) defines patentable subject matter at least for this additional reason.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-27 and 29-30 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

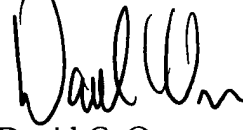
Serial No. **10/780,939**

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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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